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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

TRAN, SUSAN T

ART UNIT

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1615

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/714,950	Applicant(s) FUKASAWA ET AL.	
	Examiner S. Tran	Art Unit 1615	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 July 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 9-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 9-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

Claims 9-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ricoh KK (assignee) JP 51104829A, in view of Morishita et al. US 3,943,063 and Seitz et al. US 5,169,826.

Ricoh teaches a process for preparing microcapsule comprising mixing an aqueous suspension of a core material with an aqueous solution of an inner wall material to form microcapsule in the aqueous medium, and then adding an aqueous suspension of an outer wall material (abstract). Core material comprises wax, inner wall material includes gum arabic, and outer wall material comprises hard resin such as polyvinyl acetate (PVA) (ID).

Ricoh does not explicitly teach the claimed cellulose derivative as an outer material.

Morishita teaches polymers suitable for the preparation of microcapsule include PVA, hydroxypropylmethyl cellulose phthalate (HPMCP), and natural polymer such as gum arabic (abstract; and column 4, lines 2-15). Morishita further teaches microcapsules having shell made of natural or synthetic polymer are suitable for a wide variety of core materials including drugs, enzymes, microorganisms, foods, agricultural, medicines, fertilizers, perfumes, and dyes (column 3, lines 55-58). Thus, it would have been obvious to one of ordinary skill in the art to modify the microcapsule of Ricoh using HPMCP as an outer wall material to obtain the claimed invention. This is because Morishita teaches the use of either PVA or HPMCP as a polymer is most fitted for the

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use of microcapsule (column 4, lines 1-20), and because Ricoh teaches the use of PVA or the like suitable for the formation of microcapsule wall.

It is noted that Ricoh does not explicitly teach the boiling point of the oily liquid core. However, it is well known in the art that microcrystalline wax has a boiling point of 100°C or higher. See for example, Seitz at column 3, lines 50-61.

Response to Arguments

Applicant's arguments filed 07/10/08 have been fully considered but they are not persuasive.

Applicant argues that according to Morishita (US 3,943,063), (a) a polymer suitable as a film forming polymer for a core substance is first dissolved in a solvent (column 7 lines 23-25), (b) a core substance is dispersed or dissolved in the polymer solution to obtain a dispersion or a solution (column 7 lines 47-49), (c) the polymer solution containing the core substance is added to a vehicle in the presence of a surfactant and dispersed in extremely fine droplets (column 7 lines 58-59 and column 8 lines 38-40), (d) a non-solvent is added to the emulsion of the polymer to precipitate the polymer (column 7 lines 66-67). Examples of the polymer, the solvent, the vehicle and the non-solvent are listed in Table 1. For instance, Example 6 of Morishita describes that aqueous urease solutions are enclosed within polymeric walls of a vinyl chloride-vinylacetate copolymer. Morishita only discloses the use of a single polymer in any given combination to form the microcapsule with the other components. Consequently, one of skill in the art would not be motivated to utilize the Morishita teachings in the

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context of Ricoh and the present invention because the methods of Ricoh and the current invention use two distinct kinds of polymer in a distinct methodology for microcapsule formation. Because the methods are different, the disclosure of Morishita cannot be combined with the method of Ricoh. Morishita also discloses hydroxylpropylmethyl cellulose phthalate (HPMCP) and gum arabic as a film forming polymer (column 4 lines 15 and 17). While the Office indicates that HPMCP would allegedly be an obvious variant as the outer-wall material of Ricoh in the place of PVA, HPMCP can also be used as the inner wall material of Ricoh in the place of gum arabic. As Morishita only utilizes a single polymer, even assuming, *arguendo*, that a person of skill in the art combined the references, a combination of Morishita and Ricoh should lead to the use of HPMCP in the inner coating or both the inner and outer coating. As Applicants have previously provided declaration evidence of the importance of the components and their order of addition, the combination of Ricoh and Morishita does not arrive at the present invention.

Consequently, the above references, even with the addition, of Seitz does not lead one of skill in the art to the present invention. Applicants respectfully request reconsideration and withdrawal of the rejection.

However, in response to applicant's argument that *one of skill in the art would not be motivated to utilize the Morishita teachings in the context of Ricoh and the present invention because the methods of Ricoh and the current invention use two distinct kinds of polymer in a distinct methodology for microcapsule formation*, it is noted that one cannot show nonobviousness by attacking references individually where the rejections

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are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). In the present case, Ricoh teaches the claimed method, namely, a process for preparing microcapsule comprises suspending an aqueous suspension of a core material in an aqueous solution of an inner wall material, and then adding the obtained aqueous solution to an aqueous suspension of an outer wall material (abstract). Core material comprises wax, inner wall material includes gum arabic, and outer wall material comprises hard resin such as polyvinyl acetate (PVA) (ID). Ricoh is only deficient in the sense that Ricoh does not teach the claimed outer wall such as hydroxypropyl methyl cellulose phthalate. Morishita is cited for the teaching of the equivalency in using HPMCP and PVA as an outer microcapsule wall material.

Further, in response to applicant's argument that *because the methods of Ricoh and the present invention are different, the disclosure of Morishita cannot be combined with the method of Ricoh*, it is noted that the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981). Morishita is cited solely for the teaching of using either PVA or HPMCP as a polymer is most fitted for the preparation of microcapsule (column 4, lines 1-20). Moreover, as discussed above, Ricoh teaches the

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claimed process for preparing a microcapsule. accordingly, the methods of Ricoh and the present invention are not different.

Further, in response to applicant's argument that *Morishita also discloses hydroxylpropylmethyl cellulose phthalate (HPMCP) and gum arabic as a film forming polymer (column 4 lines 15 and 17). While the Office indicates that HPMCP would allegedly be an obvious variant as the outer-wall material of Ricoh in the place of PVA, HPMCP can also be used as the inner wall material of Ricoh in the place of gum arabic. As Morishita only utilizes a single polymer, even assuming, arguendo, that a person of skill in the art combined the references, a combination of Morishita and Ricoh should lead to the use of HPMCP in the inner coating or both the inner and outer coating*, it is noted that the gum arabic taught by Ricoh is specifically for the inner wall, and not to be mixed up with the outer wall material such as PVA.

Accordingly, the above 103(a) rejection is maintained.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

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extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to S. Tran whose telephone number is (571) 272-0606.

The examiner can normally be reached on M-F 8:00 am to 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Woodward can be reached on (571) 272-8373. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/S. Tran/
Primary Examiner, Art Unit 1615

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